

We Claim As Our Invention:

1. A diagnostic blown fuse indicator for a fuse having both a short circuit element and a current overload element, comprising:

5 a short circuit indicator in electrical communication with the short circuit element, wherein the short circuit indicator provides visual indication of a short circuit condition; and

a current overload indicator in electrical communication with the current overload element, wherein the current overload indicator provides visual indication of

10 an overload condition.

2. The blown fuse indicator of Claim 1, further comprising:

a transparent lens secured to the fuse, wherein both the short circuit indicator and the current overload indicator are visible through the lens.

15 3. The blown fuse indicator of Claim 1, further comprising:

a plurality of transparent lenses secured to the fuse, wherein each of the short circuit indicators and the current overload indicators is respectively visible through one of the plurality of lenses.

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4. The blown fuse indicator of Claim 1, wherein the short circuit indicator is coated with a chemical composition which vaporizes upon a short circuit condition.

5. The blown fuse indicator of Claim 1, wherein the current overload

25 indicator is coated with a chemical composition which vaporizes upon a current overload condition.

6. The blown fuse indicator of Claim 1, wherein the short circuit indicator includes gun cotton and an igniter wire in contact with the gun cotton.

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7. The blown fuse indicator of Claim 1, wherein the current overload indicator includes gun cotton and an igniter wire in contact with the gun cotton.

8. The blown fuse indicator of Claim 1, wherein the short circuit indicator 5 includes a label external to the fuse having a conductive layer in contact with the fuse and a temperature responsive layer in contact with the conductive layer.

9. The blown fuse indicator of Claim 1, wherein the current overload indicator includes a label external to the fuse having a conductive layer in contact with 10 the fuse and a temperature responsive layer in contact with the conductive layer.

10. The blown fuse indicator of Claim 1, wherein the short circuit indicator includes a highly resistive substance electrically communicating with a light emitting diode.

15 11. The blown fuse indicator of Claim 1, wherein the short circuit indicator includes a highly resistive substance electrically communicating with a light emitting diode.

20 12. A diagnostic blown fuse indicator for a fuse having a short circuit element in electrical communication with a current overload element, comprising:

25 a short circuit indicator electrically communicating with a point between a high electrical resistance area of the short circuit element and the current overload element; and

30 a current overload indicator electrically communicating with a point between a high electrical resistance area of the short circuit element and the current overload element.

13. The fuse of Claim 12, wherein the short circuit indicator is electrically 30 communicating in parallel with the short circuit element.

14. The fuse of Claim 12, wherein the current overload indicator is electrically communicating in parallel with the current overload element.

5 15. The fuse of Claim 12, wherein the overload element is electrically communicating in series with the short circuit element.

16. The fuse of Claim 12, wherein the overload element includes a solder piece in electrical communication with the short circuit element.

10 17. The fuse of Claim 12, wherein the short circuit element defines a slot for creating the high resistance area.

15 18. The fuse of Claim 12, wherein the short circuit indicator and the current overload indicator electrically communicate with an end cap of the fuse.

19. The fuse of Claim 12, wherein the short circuit indicator includes gun cotton and an igniter wire in contact with the gun cotton.

20 20. The fuse of Claim 12, wherein the current overload indicator includes gun cotton and an igniter wire in contact with the gun cotton.

25 21. The fuse of Claim 12, wherein the short circuit indicator includes a label external to the fuse having a conductive layer in contact with the fuse and a temperature responsive layer in contact with the conductive layer.

22. The fuse of Claim 12, wherein the current overload indicator includes a label external to the fuse having a conductive layer in contact with the fuse and a temperature responsive layer in contact with the conductive layer.

23. A diagnostic blown fuse indicator for a fuse having both a short circuit element and a current overload element, comprising:

- a short circuit indicator electrically communicating in parallel with the short circuit element, wherein the short circuit indicator is coated with a chemical composition that is adapted to vaporize after a short circuit occurs; and
- 5 a current overload indicator electrically communicating in parallel with the current overload element, wherein the overload indicator is coated with a chemical composition that is adapted to vaporize after a current overload circuit occurs.